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ABSTRACT

The two papers are based on the same data of a Delphi survey conducted in 1986 and 1987 to education professionals in 13 Western states. In the first round of the survey, 798 individuals interested in rural adult education were asked to identify barriers to rural adults' education and to propose actions and policies to overcome these barriers. In the second round survey, 196 of the 217 persons who responded to the first round of the survey then completed the questionnaire, which investigated the extent to which respondents agreed or disagreed on the 78 listed educational barriers and 125 proposed resolutions. Chi-square tests were used to examine the differences of respondents' perceptions on these issues. The results suggest that respondents geographic locations and different educational roles are associated with their perceptions of educational barriers and actions. Of the 47 barriers confirmed by a majority of respondents on the second questionnaire, 22 were classified as institutional in nature; 13 personal/institutional; 12 psychological, informational, or political. A prominent barrier was identified as the distance from educational facilities. Stronger commitments and more favorable arrangements were proposed as ways for extending postsecondary education to more rural adults. Community colleges and land-grant universities were considered as institutions that should have specific missions to educate rural adults. At least 50% of the respondents affirmed the desirability of 111 of the 125 proposed actions listed on the second questionnaire. The two papers contain the same 14 references. (ALL/GGH)

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Barriers to Education for Rural Adults in 13 Western States

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Barriers to Education for Rural Adults in 13 Western States

Participants in the National Invitational Meeting on Rural Postsecondary Education, held in 1981, focused on the varied needs of their students and called for individual attention to their unique situations (Rural Postsecondary, 1981, unpaginated). Despite their individuality, however, rural citizens were seen as sharing the common difficulty of securing access to postsecondary education programs suited to their needs. As recently as 1985, Barker found information on adult education programs for rural Americans to be "both incomplete and inadequate" (4).

McCannon (1983) noted that rural adults are "participating in educational programs at rates that are increasing faster than they are for their urban counterparts" (15). He cited data from the National Center for Educational Statistics (Kay, 1982) that showed that 27.6 percent of participants in adult education in 1981 were residents of rural communities. He pointed out that the rural population of the United States increased by 13 percent between 1975 and 1981, but that participation in adult education by rural residents increased by over 34 percent during the same period. Urban residents increased their participation in adult education by only 21 percent between 1975 and 1981 (15).

McCannon stated that significant barriers prevent more adults from attending educational programs. He reviewed several studies on barriers to adult education and concluded,

> There seems to be a general concensus among studies cited here that rural adult learners do experience significant barriers. The foremost barriers are distance and lack of prior educational attainment and available counseling services. Lack of family support and financial assistance are other barriers that rural learners face. (21)

McCannon also stated that there were regional differences among rural areas in the United States and differences in problems and needs. Low population density, he observed, is common to all rural areas. Of rural adult learners, their educational needs, and the barriers to education that confront them, McCannon said,

> . . . rural adult learners look like, act like, and learn like urban adult learners. The certified public accountant, the teacher, the electrician, the nurse, and the engineer in a small town must meet the same type of continuing education requirements for occupational recertification as their urban counterparts. The artist, the poet, the writer, and the actor create their works just as their urban counterparts do. Likewise, both the rural casual learner and the degree seeker embark on their educational journey with the same hopes, expectations, and fears as urban residents. So, there are little or no differences. Rural learners have a quest for knowledge, too--only the location of their residence differs. For some, the difference in residence

> can be a limiting factor. Resources, jobs, and educational services are fewer. But, for those who exhibit the characteristics of independence and self-direction, their residential status opens up a world of independent learning. (17)

Cross and McCartan (1984) identified three kinds of barriers to adult education:

> Situational barriers are those arising from one's situation in life at a given time. Lack of time because of responsibilities on the job or at home, for example, deters large numbers of potential learners aged 25 to 45. Lack of money deters young people and other low-income individuals; lack of child care deters young parents. Institutional barriers consist of all those practices and procedures that exclude or discourage working adults from participating in educational activities--inconvenient schedules or locations, full-time fees for part-time study, inappropriate courses of study, for example. Dispositional barriers relate to people's attitudes and perceptions of themselves as learners. Many older citizens, for example, feel that they are too old to learn. Adults with poor educational backgrounds frequently lack interest in learning or confidence in their ability to learn. (37)

In another study, McCannon (1985) surveyed adults enrolled in five higher education institutions in rural settings in Iowa, Illinois, Minnesota, North Dakota, and Wisconsin. He found that distance, costs, time, and self-confidence were greater obstacles to women than to men and that conflicts with jobs and lack of desired courses were more frequently cited as obstacles by men. Both men

and women considered the need for financial aid, information, and time off from work as important factors affecting their participation in higher education. More women than men expressed the need for babysitting services, family support, and increased self-confidence. The respondents indicated a preference for late afternoon and evening courses, weekend courses, and "clustered" courses (courses in a program during a concentrated time once a week).

Darkenwald and Merriam (1982) stated that informational and psychosocial barriers are "less obvious and in some ways more fundamental in accounting for participation or lack of participation" (137) in adult education than other types of barriers. They cited Johnstone and Rivera (1965) as evidence that knowledge of adult education resources varies with socioeconomic status and community size, low socioeconomic status and residence in rural areas being associated with lack of information. Darkenwald and Merriam also observed in the literature a link between psychosocial barriers, which were defined as "individually held beliefs, values, attitudes, or perceptions that inhibit participation in organized learning activities" (137), and low socioeconomic status.

From his vantage point as dean of a rural continuing education program that was developed in consultation with over 40 educational service providers and over 4,000 adult

learners, Treadway (1984) identified a need for institutions of higher education to relate their institutional missions to rural residents. In his 1979-82 study funded by the Fund for the Improvement of Postsecondary Education, he observed that, once a commitment to serve rural people and communities has been included in an institutionsl mission statement, there are three types of roles the institution can fulfill; they are: (1) direct provider of programs and services, (2) broker for rural communities, and (3) collaborator in jointly offfering programs and services with other institutions and agencies. In addition, he elaborated upon issues for both national and state policy. Those issues included:

1. an urban bias in the allocation of federal education dollars
2. a need to recognize the diversity of rural America in federal policy
3. a need for policy input at the federal level by rural educators
4. federal initiatives to develop and use communications technology for delivering educational programs to rural residents
5. federal support for the "systematic collection, compilation, and

analysis of the status of participation in rural adult education" (61)

6. regionalization of state higher education policy making and administration
7. input by rural educators to state policy making
8. coordination of publicly-funded institutions of higher education that serve a given rural area
9. improved communications between state policy makers and rural constituents
10. reciprocity between or among states for state funding of out-of-state students
11. coordination of the rural development efforts of all agencies, public and private.

A team of researchers at Washington State University and the University of Idaho (McDaniel, 1986) surveyed providers of educational services for rural adults and 47 rural adult learners in Alaska, California, Idaho, Montana, Oregon, Washington, and Wyoming to identify barriers to education. They found a similarity of perceived barriers among providers and learners across the seven-state region.

The investigators classified barriers into the following categories: 1. personal/situational, 2. psychological, 3. informational, 4. institutional, and 5. state policy barriers. This research, an undertaking of the Northwest Action Agenda project, resulted in a set of 23 recommendations addressed to state educational policy makers, educational institutions, rural communities, and rural education practitioners. The investigators surmised:

> The single overriding area of agreement between educational providers and rural adult learners concerns the question of access to educational opportunities. Overwhelmingly, both groups feel that, when compared with their urban counterparts, the rural adult learner does not have equal access to educational programs. (15)

The conclusion of the Northwest Action Agenda project that barriers to rural adult education were not uniform across the seven-state region is relevant to the present study, since there is an overlap in both geographic and chronological parameters between the two.

Statement of the Problem

During the summer of 1986 a modified Delphi survey was inaugurated to determine barriers to educational programs that affect rural adults and the actions and public policies required to improve access to education for rural adults in the states of Alaska, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. According to United States Census

figures (U. S. Bureau of the Census, 1983), this region comprises about 47 percent of the land area of the nation, but contained less than 9 percent of the country's population in 1980. The region had a population density of 11.9 people per square mile, compared with 64 per square mile for the United States as a whole. Survey respondents were 217 rural education researchers, community education personnel, rural adult educators, legislators, rural teachers and school administrators, county extension agents, regional educational service agency (RESA) personnel, state education agency (SEA) staff, and others in the 13 states. The present paper focuses on the barriers to participation in adult education by rural residents perceived by respondents to the survey. Reports on the actions and public policies the participants recommended to overcome the barriers have been presented elsewhere (Easton, 1988, 1989).

Methodology

The study was conducted by means of a three-round modified Delphi survey. The mailing list of the National Action Agenda for Postsecondary Rural Education was used to identify persons interested in education for adults in rural communities in the 13 states selected for the survey. In addition, the County Agents Directory (1984) was used to identify Cooperative Extension Service personnel working in rural areas of those states. The governors of the 13 states were asked to provide names and addresses of legislators

serving on education-related legislative committees. Everyone on the National Action Agenda mailing list from the 13 states was placed on the mailing list for this study. Individuals were rationally selected for the survey from the lists of county agents and state legislators. In all, 798 persons were invited to participate in the modified Delphi activity.

A three-item open-ended questionnaire was used to solicit responses in the first round of the modified Delphi survey. Participants were asked to list three to five responses for each of the following items: 1. barriers to education that exist for rural adults, 2. actions that are needed to provide adequate educational opportunities for rural adults, and 3. public policies that are needed to reduce barriers to education and/or improve educational opportunities for rural adults. A total of 217 completed questionnaires was returned. Responses to the first two items were used to generate a 203-item questionnaire on barriers to education and actions required to provide adequate educational opportunities for rural adults for the second round of the modified Delphi survey. Of the 203 items on the questionnaire, 78 dealt with perceived barriers, 125 with proposed actions to overcome them. Responses to the third item were consolidated into 89 public policy statements to be evaluated by participants in the third round of the study.

The second-round questionnaire was mailed to the 217 first-round respondents in March 1987. A total of 196 completed questionnaires was returned. As part of the second round, participants were asked to indicate the extent of their agreement or disagreement with the 78 barriers listed, using a five-point Likert-type scale. Respondents used the following code: 5 = Strongly Agree, 4 = Agree, 3 = Not Sure Whether I Agree or Disagree, 2 = Disagree, 1 = Strongly Disagree.

Chi square tests of independence were conducted for each of the 78 barriers on the second-round questionnaire to determine whether there were significant differences (.05 level) among the respondents in their perceptions of barriers that were related to their geographic locations. A 3 x 3 factorial design was used. In order to minimize the number of vacant cells in the chi square contingency tables, responses to the barrier descriptions were collapsed into three categories: 1 = "Disagree" or "Strongly Disagree," 2 = "Not Sure Whether I Aree or Disagree," and 3 = "Agree" or "Strongly Agree." The 13-state area was divided into three sub-regions: 1. Plains States (North Dakota, South Dakota, Nebraska, and Kansas), 2. Mountain States (Montana, Wyoming, Colorado, Idaho, Utah, and Nevada), and 3. Northwest Coast States (Alaska, Washington, and Oregon).

Chi square analyses were also conducted to determine whether there were significant differences (.05 level) in

the perception of barriers to education among the respondents that were related to the different roles they played in rural education. A 3 x 8 factorial design was used. Responses to the policy statements were collapsed into three categories as described in the preceding paragraph. The participants were divided into eight categories: 1. legislators, 2. adult educators, 3. college and university faculty and administrators, 4. Cooperative Extension Service personnel, 5. rural school teachers and administrators, 6. regional educational service agency (RESA) personnel, 7. state education agency (SEA) personnel, and 8. others.

Description of the Data

There were 196 participants in the second round of the survey. Forty-seven were from the Plains states, 101 from the Mountain states, and 48 from the Northwest Coast states. They were distributed among the role categories as follows: three legislators, 13 adult educators, 75 college and university personnel, 45 Cooperative Extension Service personnel, 12 rural teachers and administrators, 11 RESA personnel, 16 SEA personnel, and 21 others. The composition of the respondent group is presented in Table 1.

Table 1

Participants in the Second Round
of the Modified Delphi Survey

Roles	Number of Participants			
	Geographic Regions			
	Plains States	Mountain States	Northwest Coast States	Total
Legislators	1	2		3
Adult Educators	2	8	3	13
College/ University	21	31	23	75
Cooperative Extension	13	20	12	45
Rural Educators	2	10		12
RESA Personnel		9	2	11
SEA Personnel	2	10	4	16
Others	6	11	4	21
Total	47	101	48	196

For the purpose of analysis, the 78 perceived bariers were grouped into the following five categories: 1. personal/situational barriers, 2. psychological barriers, 3. informational barriers, 4. institutional barriers, and 5. political barriers. These categories are not discrete and were adopted only as an attempt to provide some focus for the reader.

Personal/Situational Barriers

Responses to the first round of the modified Delphi survey were consolidated into 26 personal/situational barriers to education for rural adults. Thirteen of them were validated by over 50 percent of the survey participants. The 26 barriers are listed below with the percentage of respondents who chose either "strongly agree" or "agree" shown in parentheses:

Sparse population combined with diverse educational needs (91.7%)

Distance of rural adults from college campuses (90.3%)

Excessive demands on time due to distance from educational programs (79.2%)

Full-time work and family responsibilities (73.0%)

Cost of transportation to educational programs (70.8%)

Distance of rural adults from off-campus instruction sites (69.9%)

Insufficient employment opportunities upon completion of educational programs (68.4%)

Competing demands on time from school activities, agribusinesses, and special interest groups (66.8%)

Poor travel conditions (severe weather, bad roads, absence of roads, etc.) (63.3%)

The place-boundness of rural adults (61.2%)

Lack of adequate educational facilities in rural communities (53.1%)

No networks of education-oriented adults (53.1%)

Farm financial crisis (51.5%)

High cost of educational programs to participants (46.9%)

Lack of public transportation service (46.4%)

Difficulty in coordinating schedules of family members (45.8%)

Inadequate child care services (45.4%)

Rural poverty (44.4%)

Inconvenient scheduling of adult classes (42.9%)

Lack of cultural/educational events in rural areas (38.3%)

Rivalry between communities that could share educational services (37.2%)

Inadequate time available for educational pursuits due to the demands of agricultural work (36.2%)

Welfare cycle (32.1%)

Lack of social outlets in rural communities (30.1%)

Illiteracy among rural adults (27.0%)

Language and/or cultural differences (25.5%)

Chi square analyses of these 26 items yielded six significant chi square values associated with the geographic location of respondents and one related to the roles of the

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respondents in rural education. The "distance of rural adults from off-campus instruction sites" was perceived as a barrier by about 72 percent of Mountain and Northwest Coast participants, but only 62 percent of those from the Plains states agreed. "Poor travel conditions" was viewed as a barrier by 81 percent of the Northwest Coast respondents and 62 percent of the Mountain state residents in the survey, but only 47 percent of the Plains state participants considered it a barrier. Seventy-one percent of the Northwest Coast participants thought that "cost of transportation to educational programs" was a barrier to educational opportunity for rural adults, but only 61 percent and 40 percent of the Mountain and Plains respondents, respectively, concurred.

Sixty-five percent of the participants from the Northwest Coast states indicated that the "lack of adequate educational facilities in rural communities" was a barrier, while only 40 percent of those from the Plains and 54 percent of those from the Mountain states agreed. "Language and/or cultural differences" were seen as barriers by 46 percent of the respondents from the Northwest Coast, but only 16 percent of those from the Mountain states and 26 percent of those from the Plains states saw them as such. A strong majority (65 percent) of the Northwest Coast respondents thought that "rural poverty" was a barrier to educational opportunity for rural adults. However, only 34

percent of the Mountain states participants and 47 percent of those from the Plains states thought so.

Thirty-six percent of all respondents said that "inadequate time available for educational pursuits due to the demands of agricultural work" was a barrier. However, nearly one-half of the Cooperative Extension Service personnel and two-thirds of the legislators identified that item as a barrier, while less than 13 percent of the RESA and SEA personnel concurred.

Psychological Barriers

Twelve psychological barriers were derived from responses to the first round of the survey. Four of them were validated by over 50 percent of the participants. The 12 psychological barriers are listed below with the percentage of respondents who chose either "strongly agree" or "agree" shown in parentheses:

Fear of entering or re-entering the educational process (78.1%)

Reluctance to disrupt family relationships in order to obtain education (62.8%)

Low self-confidence of rural adults in their ability to learn in formal educational settings (51.5%)

Resistance to change (50.5%)

Lack of academic skills, poor preparation for continuing education beyond high school (49.5%)

Negative attitudes toward traditional offerings from colleges (49.0%)

Lack of peer and/or family support for rural adults who might seek self-improvement through education (46.9%)

Lack of personal commitment to lifelong learning (46.4%)

Perceived irrelevance of education to "real life" (45.4%)

Embarrassment and self-consciousness associated with college enrollment by adults (36.7%)

Lack of interest in educational programs among rural adults (29.6%)

Negative attitude of rural adults toward learning from "outsiders" (26.5%)

Chi square analyses of these 12 items produced one significant chi square value associated with the geographic location of the respondents and one related to the roles of the respondents in rural education. Only 32 percent of the Mountain states participants perceived "embarassment and self-consciousness associated with college enrollment by adults" as a barrier to educational opportunity. However, 40 percent of those from the Northwest Coast states and 45 percent of those from the Plains subregion viewed that as a barrier.

Nearly one-half of all respondents regarded "negative attitudes toward traditional offerings from colleges" as a barrier. Fifty-seven percent of the college and university faculty and administrators who responded thought negative attitudes constituted a barrier, as did 63 percent of the state education agency personnel and 70 percent of the adult

educators. However, only 9 percent of the regional educational service agency staff members saw such attitudes as a barrier.

Informational Barriers

Analysis of the responses to the first-round survey led to the inclusion of four informational barriers in the second-round questionnaire. Three of them were validated by over 50 percent of the survey participants. The four informational barriers are listed below with the percentage of respondents who chose either "strongly agree" or "agree" shown in parentheses:

> Lack of career and educational counseling services for rural adults (76.5%)
>
> Lack of knowledge of existing software for independent study (67.9%)
>
> Lack of information as to availability of educational programs (55.6%)
>
> Poor TV and/or radio reception in some rural areas (49.5%)

Chi square analyses of these four items yielded one significant chi square value that was associated with the geographic location of the respondents. Close to 60 percent of the participants from the Mountain and Northwest Coast states agreed that "poor TV and/or radio reception in some rural areas" was a barrier to educational opportunity for rural adults, but only 26 percent of those from the Plains states perceived it as such. No significant chi square

values were associated with the roles of respondents in rural education.

Institutional Barriers

Thirty institutional barriers were derived from the open-ended responses of the first-round respondents in this survey. Over 50 percent of the survey participants validated 22 of them. The institutional barriers are listed below with the percentage of the respondents who chose either "strongly agree" or "agree" shown in parentheses:

Budgetary constraints of educational institutions (83.2%)

High cost of delivering adult education to rural communities (79.6%)

Difficulty (near impossibility) of completing a degree program in a rural community (74.5%)

Low enrollments in classes for rural adults (73.0%)

Lack of personal contact between rural adults and college personnel (72.4%)

Absence of financial aid for part-time off-campus students (68.9%)

Inadequate delivery systems which fail to reach all adults who should be served (68.4%)

Difficulty of recruiting instructors to deliver programs at distant locations (65.8%)

Minimum class size requirements (65.3%)

Lack of incentives to make educational programs available to rural adults (64.3%)

Lack of coordination and cooperation among providers of educational programs (63.8%)

Unavailability of resources for independent learning in rural communities (61.7%)

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Lack of information concerning the educational needs of rural adults (61.2%)

Shortage of instructors who have been properly prepared for adult education (60.2%)

Narrowness of educational offerings to rural adults (agribusiness, traditional college courses, etc.) (58.2%)

Lack of programs aimed at job training or work-related competencies (58.2%)

Insufficient non-traditional scheduling of courses (evenings, weekends, summers, intensive short-terms) (56.6%)

Scarcity of programs relevant to the educational needs of rural adults (55.6%)

Inadequate instructional support services (library, information retrieval systems, media equipment and materials, etc.) for off-campus classes (54.6%)

Excessive demands upon educational personnel who provide off-campus instruction as overtime work or as "moonlighting" (54.6%)

Shortage of local leaders to organize and deliver educational programs for rural adults (53.6%)

Unavailability of technology-based alternative educational delivery systems (telecommunications, video cassettes, microcomputer courseware, public television, etc.) (52.6%)

Inefficient use of available resources (49.5%)

Poor pay for instructors of rural adults (46.9%)

Shortage of minority instructors to serve as role models for culturally-different rural populations, such as Native Americans and Alaska Natives (46.4%)

Lack of learning materials designed for adult learners (40.3%)

Refusal of colleges to offer courses that would be of greatest interest to rural adults (36.2%)

Negative attitude of college personnel toward the learning potential of rural adults (29.6%)

Unfamiliarity of rural adults with many instructors due to turnover (25.0%)

Restrictions and fees placed on use of public school facilities for evening, weekend, or summer classes (25.0%)

Chi square analyses of these 30 items produced two significant chi square values that were associated with the geographic location of the respondents and four that were related to the roles of the respondents in rural education. Over 80 percent of the participants from the Mountain and Northwest Coast states validated "high cost of delivering adult education to rural communities" as a barrier, but only 64 percent of those from the Plains states agreed. Seventy-three percent of the Northwest Coast respondents thought that a "shortage of minority instructors to serve as role models for culturally-different rural populations, such as Native Americans and Alaska Natives," was a barrier to educational opportunity; however, only 38 percent of the participants from the Plains and Mountain sub-regions thought so.

Sixty percent or more of the adult educators, college and university faculty and administrators, and Cooperative Extension personnel in the second-round survey considered "inadequate instructional support services (library, information retrieval systems, media equipment and materials, etc.) for off-campus classes" to be a barrier.

None of the legislators, though, and only about 40 percent of the rural teachers and administrators, SEA personnel, and "others" concurred with that view. Seventy-three percent of the RESA staff respondents, 70 percent of the adult educators, and 63 percent of the college and university personnel agreed that "unavailability of technology-based alternative educational delivery systems (telecommunications, video cassettes, microcomputer courseware, public television, etc.)" posed a barrier to educational opportunity for rural adults. Only 42 percent of the Cooperative Extension personnel and the rural educators, 33 percent of the legislators, and 24 percent of the "others" identified that item as a barrier, however. "Budgetary constraints of educational institutions" were regarded as a barrier to educational opportunity by 83 percent of all respondents, including all of the legislators and over 90 percent of the college and university personnel and RESA staff members, but only 50 percent of the rural teachers and administrators were in accord. A strong majority (58 percent) of all respondents viewed "lack of programs aimed at job training or work-related competencies" as a barrier to education for rural adults. Three-fourths or more of the Cooperative Extension Service personnel, rural educators, and RESA personnel who responded agreed that item was a barrier, while one-third to nearly one-half

of the legislators, "others," and college and university faculty and admnistrators thought it was.

Political Barriers

Six political barriers were identified among the responses to the first round of the modified Delphi survey. Five of them were validated by over 50 percent of the participants. The political barriers are listed below with the percentage of the respondents who chose either "strongly agree" or "agree" shown in parentheses:

Lack of federal and state funds in support of rural adult education (79.1%)

Lack of public financing for rural adult education (78.1%)

Legislative philosophy that extension courses must be self-supporting (63.3%)

Low priority given to educating rural adults (62.8%)

Nonexistent or insufficient public funding for statewide public television (62.2%)

Taxing districts that are stable, but have inadequate tax bases (24.5%)

Chi square analyses of these six items yielded one significant chi square value that was related to the geographic location of the respondents. Seventy percent of the participants from the Mountain states and 58 percent of those from the Northwest Coast states thought that "nonexistent or insufficient public funding for statewide public television" was a barrier to educational opportunity for rural adults, but only 49 percent of the Plains states

respondents thought so. There were no significant chi square values associated with the roles of participants in rural education.

Conclusions

Participants in this modified Delphi survey identified 78 perceived barriers to education for rural adults. A majority of respondents confirmed 47 of the barriers by indicating their agreement with them on the second-round questionnaire.

The barriers identified and validated in the 13-state region represented those types of barriers described in previous research (Cross & McCartan, 1984; Darkenwald & Merriam, 1982; McDaniel, 1986). Twenty-two of the 47 validated barriers were classified as institutional barriers while 13 of them were categorized as personal/situational barriers. Twelve of the validated barriers were grouped under the headings of psychological, informational, or political barriers.

There was broad agreement among the respondents across the 13-state region and across categories based on the roles they played in rural education. Only 11 significant chi square values associated with the location of respondents and six related to their roles were obtained.

Discussion

The participants in this modified Delphi survey were to a great extent self-selected. The fact that 196 of the 217

first-round respondents chose to answer a 203-item questionnaire in the second round demonstrated a commitment to the process and suggested a high degree of involvement with the subject matter of the study. Nevertheless, the participants represented only themselves. Generalization from this sample is not recommended.

Although this survey revealed broad agreement concerning educational barriers to rural adults across a vast expanse of territory, the results are, nevertheless, in accord with the 1986 report of the Northwest Action Agenda Project (McDaniel) which stated that "the barriers to rural adult education are not uniform across the region" (15). Even barriers clustered around distance from educational programs were not uniformly perceived by survey participants from Plains, Mountain, and Northwest Coast states. Apparently, there were differences among these subregions in the extent to which educational programs and facilities, including public television, were provided in rural communities. No state-by-state analysis was attempted, but differences in patterns of barriers between adjacent states would not be unexpected.

Distance from educational facilities and programs ad difficulties associated with distance were identified, predictably (McCannon, 1983), as prominent barriers to rural adult education. Relatively few "psychological barriers" and "informational barriers," however, were validated by a

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majority of the panelists. It should be remembered, though, that the respondents were not known to be consumers of adult education programs and, therefore, may not have been in the best position to judge the presence or absence of such obstacles to learners. On the other hand, these results appear to conform to those of the Northwest Action Agenda Project (McDaniel, 1986).

The lists of "institutional barriers" and "political barriers" reported in this study underscore Treadway's (1984) concern for institutional commitment to serving the educational needs of rural residents. Barriers such as budgetary constraints, absence of financial aid, inadequate delivery systems, and lack of coordination among providers call for institutional and political acts of will to overcome them. Producing such commitments to meeting the needs of rural folk is, to say the least, a challenge in a predominantly urban society.

The barriers recognized by participants in this 13-state survey form an agenda of issues that might be addressed by panels similar in composition to the Delphi panel used in this study. Policymakers might convene commissions or committees of legislators, rural educators, adult educators, higher education personnel, and RESA and SEA staff to propose measures that would reduce or remove the barriers. Rural adult learners, who were not ostensibly involved in this study, should also be invited to

participate in proposing solutions to the problem of educational barriers.

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Overcoming Barriers to Education for Rural Adults: Proposed Steps to Provide Adequate Educational Opportunities

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Participants in the National Invitational Meeting on Rural Postsecondary Education, held in 1981, focused on the varied needs of their students and called for individual attention to their unique situations (Rural Postsecondary, 1981, unpaginated. Despite their individuality, however, rural citizens were seen as sharing the common difficulty of securing access to postsecondary education programs suited to their needs. As recently as 1985, Barker found information on adult education programs for rural Americans to be "both incomplete and inadequate" (4).

McCannon (1983) noted that rural adults are "participating in educational programs at rates that are increasing faster than they are for their urban counterparts" (15). He cited data from the National Center for Educational Statistics (Kay, 1982) that showed that 27.6 percent of participants in adult education in 1981 were residents of rural communities. He pointed out that the rural population of the United States increased by 13 percent between 1975 and 1981, but that participation in adult education by rural residents increased by over 34 percent during the same period. Urban residents increased their participation in adult education by only 21 percent between 1975 and 1981 (15).

McCannon stated that significant barriers prevent more adults from attending educational programs. He reviewed several studies on barriers to adult education and concluded,

> There seems to be a general consensus among studies cited here that rural adult learners do experience significant barriers. The foremost barriers are distance and lack of prior educational attainment and available counseling services. Lack of family support and financial assistance are other barriers that rural learners face. (21)

McCannon also stated that there were regional differences among rural areas in the United States and differences in problems and needs. Low population density, he observed, is common to all rural areas. Of rural adult learners, their educational needs, and the barriers to education that confront them, McCannon said,

> . . . rural adult learners look like, act like, and learn like urban adult learners. The certified public accountant, the teacher, the electrician, the nurse, and the engineer in a small town must meet the same type of continuing education requirements for occupational recertification as their urban counterparts. The artist, the poet, the writer, and the actor create their works just as their urban counterparts do. Likewise, both the rural casual learner and the degree seeker embark on their educational journey with the same hopes, expectations, and fears as urban residents. So, there are little or no differences. Rural learners have a quest for knowledge, too--only the location of their residence differs. For some, the difference in residence

> can be a limiting factor. Resources, jobs, and educational services are fewer. But, for those who exhibit the characteristics of independence and self-direction, their residential status opens up a world of independent learning. (17)

Cross and McCartan (1984) identified three kinds of barriers to adult education:

> Situational barriers are those arising from one's situation in life at a given time. Lack of time because of responsibilities on the job or at home, for example, deters large numbers of potential learners aged 25 to 45. Lack of money deters young people and other low-income individuals; lack of child care deters young parents. Institutional barriers consist of all those practices and procedures that exclude or discourage working adults from participating in educational activities--inconvenient schedules or locations, full-time fees for part-time study, inappropriate courses of study, for example. Dispositional barriers relate to people's attitudes and perceptions of themselves as learners. Many older citizens, for example, feel that they are too old to learn. Adults with poor educational backgrounds frequently lack interest in learning or confidence in their ability to learn. (37)

In another study, McCannon (1985) surveyed adults enrolled in five higher education institutions in rural settings in Iowa, Illinois, Minnesota, North Dakota, and Wisconsin. He found that distance, costs, time, and self-confidence were greater obstacles to women than to men and that conflicts with jobs and lack of desired courses were more frequently cited as obstacles by men. Both men

and women considered the need for financial aid, information, and time off from work as important factors affecting their participation in higher education. More women than men expressed the need for babysitting services, family support, and increased self-confidence. The respondents indicated a preference for late afternoon and evening courses, weekend courses, and "clustered" courses (courses in a program during a concentrated time once a week).

Darkenwald and Merriam (1982) stated that informational and psychosocial barriers are "less obvious and in some ways more fundamental in accounting for participation or lack of participation" (137) in adult education than other types of barriers. They cited Johnstone and Rivera (1965) as evidence that knowledge of adult education resources varies with socioeconomic status and community size, low socioeconomic status and residence in rural areas being associated with lack of information. Darkenwald and Merriam also observed in the literature a link between psychosocial barriers, which were defined as "individually held beliefs, values, attitudes, or perceptions that inhibit participation in organized learning activities" (137), and low socioeconomic status.

From his vantage point as dean of a rural continuing education program that was developed in consultation with over 40 educational service providers and over 4,000 adult

learners, Treadway (1984) identified a need for institutions of higher education to relate their institutional missions to rural residents. In his 1979-82 study funded by the Fund for the Improvement of Postsecondary Education, he observed that, once a commitment to serve rural people and communities has been included in an institutionsl mission statement, there are three types of roles the institution can fulfill; they are: (1) direct provider of programs and services, (2) broker for rural communities, and (3) collaborator in jointly offfering programs and services with other institutions and agencies. In addition, he elaborated upon issues for both national and state policy. Those issues included:

1. an urban bias in the allocation of federal education dollars
2. a need to recognize the diversity of rural America in federal policy
3. a need for policy input at the federal level by rural educators
4. federal initiatives to develop and use communications technology for delivering educational programs to rural residents
5. federal support for the "systematic collection, compilation, and

analysis of the status of participation in rural adult education" (61)

6. regionalization of state higher education policy making and administration
7. input by rural educators to state policy making
8. coordination of publicly-funded institutions of higher education that serve a given rural area
9. improved communications between state policy makers and rural constituents
10. reciprocity between or among states for state funding of out-of-state students
11. coordination of the rural development efforts of all agencies, public and private.

A team of researchers at Washington State University and the University of Idaho (McDaniel, 1986) surveyed providers of educational services for rural adults and 47 rural adult learners in Alaska, California, Idaho, Montana, Oregon, Washington, and Wyoming to identify barriers to education. They found a similarity of perceived barriers among providers and learners across the seven-state region.

The investigators classified barriers into the following categories: 1. personal/situational, 2. psychological, 3. informational, 4. institutional, and 5. state policy barriers. This research, an undertaking of the Northwest Action Agenda project, resulted in a set of 23 recommendations addressed to state educational policy makers, educational institutions, rural communities, and rural education practitioners. The investigators surmised:

> The single overriding area of agreement between educational providers and rural adult learners concerns the question of access to educational opportunities. Overwhelmingly, both groups feel that, when compared with their urban counterparts, the rural adult learner does not have equal access to educational programs. (15)

The conclusion of the Northwest Action Agenda project that barriers to rural adult education were not uniform across the seven-state region is relevant to the present study, since there is an overlap in both geographic and chronological parameters between the two.

Statement of the Problem

During the summer of 1986 a modified Delphi survey was inaugurated to determine barriers to educational programs that affect rural adults and actions and policies required to improve access to education for rural adults in the states of Alaska, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. According to United States Census

figures (U. S. Bureau of the Census, 1983), this region comprises about 47 percent of the land area of the nation, but contained less than 9 percent of the country's population in 1980. The region had a population density of 11.9 people per square mile, compared with 64 per square mile for the United States as a whole. Survey respondents were 217 rural education researchers, community education personnel, rural adult educators, legislators, rural teachers and school administrators, county extension agents, regional educational service agency (RESA) personnel, state education agency (SEA) staff, and others in the 13 states. The present paper focuses on the barriers to participation in adult education by rural residents perceived by respondents to the survey. Reports on the actions and public policies the participants recommended to overcome the barriers have been presented elsewhere (Easton, 1988, 1989).

Methodology

The study was conducted by means of a three-round modified Delphi survey. The mailing list of the National Action Agenda for Postsecondary Rural Education was used to identify persons interested in education for adults in rural communities in the 13 states selected for the survey. In addition, the County Agents Directory (1984) was used to identify Cooperative Extension Service personnel working in rural areas of those states. The governors of the 13 states were asked to provide names and addresses of legislators

serving on education-related legislative committees. Everyone on the National Action Agenda mailing list from the 13 states was placed on the mailing list for this study. Individuals were rationally selected for the survey from the lists of county agents and state legislators. In all, 798 persons were invited to participate in the modified Delphi activity.

A three-item open-ended questionnaire was used to solicit responses in the first round of the modified Delphi survey. Participants were asked to list three to five responses for each of the following items: 1. barriers to education that exist for rural adults, 2. actions that are needed to provide adequate educational opportunities for rural adults, and 3. public policies that are needed to reduce barriers to education and/or improve educational opportunities for rural adults. A total of 217 completed questionnaires was returned. Responses to the first two items were used to generate a 203-item questionnaire on barriers to education and actions required to provide adequate educational opportunities for rural adults for the second round of the modified Delphi survey. Of the 203 items on the questionnaire, 78 dealt with perceived barriers, 125 with proposed actions to overcome them. Responses to the third item were consolidated into 89 public policy statements to be evaluated by participants in the third round of the study.

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The second-round questionnaire was mailed to the 217 first-round respondents in March 1987. A total of 196 completed questionnaires was returned. As part of the second round of the survey, participants were asked to evaluate the desirability of 125 actions proposed to overcome barriers to education for rural adults. The respondents used a five-point scale ranging from "Highly Undesirable" to "Highly Desirable." The scale and its descriptors are shown in Figure 1.

Chi square tests of independence were conducted for each of the 125 proposed actions on the second-round questionnaire to determine whether there were significant differences (.05 level) among the respondents in their perceptions of the desirability of those actions that were related to their geographic locations. A 3 x 3 factorial design was used. In order to minimize the number of vacant cells in the chi square contingency tables, responses to the proposed actions were collapsed into three categories: 1 = "Undesirable" or "Highly Undesirable," 2 = "Neither Desirable nor Undesirable," and 3 = "Desirable" or "Highly Desirable." The 13-state area was divided into three sub-regions: 1. Plains States (North Dakota, South Dakota, Nebraska, and Kansas), 2. Mountain States (Montana, Wyoming, Colorado, Idaho, Utah, and Nevada), and 3. Northwest Coast States (Alaska, Washington, and Oregon).

Figure 1

5 = Highly Desirable	* Will have a positive effect and little or no negative effect * Extremely beneficial * Justifiable on its own merit
4 = Desirable	* Will have a positive effect * Beneficial * Justifiable as a by-product or in conjunction with other items
3 = Neither Desirable nor Undesirable	
2 = Undesirable	* Will have a negative effect * Harmful * May be justified only as a by-product of a very desirable item
1 = Highly Undesirable	* Will have a major negative effect * Extremely harmful * Not justifiable

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Chi square analyses were also conducted to determine whether there were significant differences (.05 level) in the perception of the desirability of proposed actions among the respondents that were related to the different roles they played in rural education. A 3 x 8 factorial design was used. Responses to the proposed actions were collapsed into three categories as described in the preceding paragraph. The participants were divided into eight categories: 1. legislators, 2. adult educators, 3. college and university faculty and administrators, 4. Cooperative Extension Service personnel, 5. rural school teachers and administrators, 6. regional educational service agency (RESA) personnel, 7. state education agency (SEA) personnel, and 8. others.

Description of the Data

There were 196 participants in the second round of the survey. Forty-seven were from the Plains states, 101 from the Mountain states, and 48 from the Northwest Coast states. They were distributed among the role categories as follows: three legislators, 13 adult educators, 75 college and university personnel, 45 Cooperative Extension Service personnel, 12 rural teachers and administrators, 11 RESA personnel, 16 SEA personnel, and 21 others. The composition of the respondent group is presented in Table 1.

Table 1

Participants in the Second Round of the Modified Delphi Survey

Roles	Number of Participants			
	Geographic Regions			
	Plains States	Mountain States	Northwest Coast States	Total
Legislators	1	2		3
Adult Educators	2	8	3	13
College/ University	21	31	23	75
Cooperative Extension	13	20	12	45
Rural Educators	2	10		12
RESA Personnel		9	2	11
SEA Personnel	2	10	4	16
Others	6	11	4	21
Total	47	101	48	196

For the purpose of analysis, the 125 proposed actions were grouped into the following categories: 1. institutional policies, 2. interagency/interinstitutional coordination, 3. curricular reforms, 4. alternative delivery systems, 5. information/publicity, 6. increased support, 7. student services and financial assistance, 8. instructional personnel, 9. instructional support services, and 10. rural elementary and secondary education reforms. The data from the responses to the survey will be described below.

Institutional Policies

Responses to the first round of the modified Delphi survey were consolidated into 10 proposed actions involving institutional policies. More than 60 percent of the second-round respondents evaluated eight of those actions as either "highly desirable" or "desirable." The proposed institutional policy actions are listed below with the percentage of respondents who chose either "highly desirable" or "desirable" shown in parentheses:

> Incorporate adult education into mission statements of colleges and universities. (88.3%)
>
> Increase commitment to adult literacy. (88.3%)
>
> Offer courses for rural adults long enough for them to develop a favorable reputation in rural communities. (86.7%)
>
> Subsidize low-enrollment courses, rather than cancel them. (82.1%)
>
> Have community colleges provide adult basic education, college credit classes, and community

service activities to each community within their service districts. (80.1%)

Conduct research on rural adult education. (75.0%)

Have land grant universities provide leadership in providing education for rural adults. (73.0%)

Reduce fees charged for off-campus courses. (60.7%)

Eliminate the concept of residence centers for college and university programs. (44.4%)

Waive college tuition and fees for persons enrolling in rural continuing education courses. (27.0%)

Chi square analyses of these 10 items yielded three significant chi square values associated with the roles of the respondents in rural education. There were no significant chi square values associated with the geographic location of the respondents.

Nearly 87 percent of all respondents considered the proposal to "offer courses for rural adults long enough for them to develop a favorable reputation in rural communities" desirable, but only 75 percent of the rural school teachers and administrators and 69 percent of SEA personnel responding thought so. All of the legislators, adult educators, and RESA personnel who responded to the survey regarded the proposal to "subsidize low-enrollment courses, rather than cancel them," desirable, but only 64 percent of Cooperative Extension agents did. Seventy-three percent of the respondents, including all of the legislators and 98 percent of the Cooperative Extension personnel, thought the

idea to "have land grant universities provide leadership in providing education for rural adults" was desirable; however, only 55 and 44 percent of the respondents from RESAs and SEAs, respectively, agreed.

Interagency/Interinstitutional Coordination

The second-round questionnaire included 24 proposed actions that called for coordination among agencies and institutions. At least 50 percent of the second-round participants rated 22 of those actions as either "highly desirable" or "desirable." The proposed coordination steps are listed below with the percentage of respondents who chose either "highly desirable" or "desirable" shown in parentheses:

> Obtain reciprocal agreements among colleges and universities within a state or within an interstate region to accept course work offered by each other in rural communities. (93.4%)
>
> Make public school buildings available for adult education. (93.4%)
>
> Develop interagency cooperation in providing programs for rural adult learners. (92.9%)
>
> Increase networking among rural school districts, governmental agencies, and community organizations. (90.8%)
>
> Work with existing community groups to develop educational opportunities for rural adults. (89.3%)
>
> Increase cooperation among colleges and universities and reduce concern for "territorial rights." (88.8%)
>
> Improve communication between postsecondary and k-12 educators. (85.7%)

Develop state plans for providing educational programs to rural adults. (84.7%)

Charge existing institutions with responsibility for providing educational opportunities to rural adults. (82.1%)

Make non-traditional delivery programs legitimate through approval by regional and national accrediting agencies. (80.6%)

Develop comprehensive plans for rural adult education with goals and objectives for a five-year period. (79.1%)

Make public school buildings available for adult leisure time activities. (78.1%)

Foster local educational institutions that already serve rural adults by releasing state university faculty to offer extension courses and assist in setting up community education programs. (78.1%)

Broker educational programs from various sources, such as colleges, public broadcasting, educational consortia. (76.5%)

Prevent duplication of educational services to rural adults by various providers. (74.0%)

Establish adult education cooperatives. (70.9%)

Develop leadership for rural adult education within state departments of education. (70.9%)

Allow public schools to offer postsecondary courses in communities not served by any college. (69.4%)

Establish regional lifelong learning centers with on-site coordinators. (68.4%)

Use every institution of higher education in the state to offer education to rural adults. (64.3%)

Eliminate fees covering costs of utilities and building supervision when public schools are used for adult education. (57.1%)

Establish state policy-making boards for rural education. (50.0%)

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Identify a single university in each state to coordinate a statewide educational program for adults in rural communities. (35.2%)

Establish rural adult education districts with local boards of trustees. (29.6%)

Chi square analyses of these 24 items yielded five significant chi square values associated with the geographic location of respondents and four related to the roles of the respondents in rural education. These significant differences in perceptions of the desirability of the proposed actions are highlighted below.

More than 94 percent of the participants from the Mountain and Northwest Coast states found the proposal to "obtain reciprocal agreements among colleges and universities within a state or within an interstate region to accept course work offered by each other in rural communities" desirable, but fewer (89%) of those from the Plains concurred. On the proposal to "make public school buildings available for adult education," nearly 90 percent of the respondents from Washington, Oregon, and Alaska thought it desirable, while at least 94 percent of those from the Plains and the Mountain states indicated it was. Almost 93 percent of the second-round participants, but only 87 percent of those from the Plains subregion, agreed on the desirability of developing "interagency cooperation in providing programs for rural adult learners." About 92 percent of the respondents from the Mountain and Northwest

Coast states thought it desirable to "increase cooperation among colleges and universities and reduce concern for 'territorial rights,'" but less than 80 percent to of those from the Plains did. Eighty-three percent of the participants from the Northwest Coast states found it desirable to "prevent duplication of educational services to rural adults by various providers," but only about 70 percent of those from the other two subregions concurred.

At least 90 percent of every role category thought that developing "interagency cooperation in provide into programs for rural adult learners" was desirable, but only one of the three legislators participating in the second round of the survey agreed. Seventy-eight percent of the respondents found desirable the proposal to "foster local educational institutions that already serve rural adults by releasing state university faculty to offer extension courses and assist in setting up community education programs;" however, only one-third of the legislators and one-half of the rural school personnel did. Nearly 70 percent of all participants, indluding all of the legislators and all of the RESA personnel, thought it was desirable to "allow public schools to offer postsecondary courses in communities not served by any college," but only 62 percent of the adult educators and 51 percent of the college and university personnel surveyed thought so. Sixty-eight percent of all respondents, including at least 80 percent of the adult

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educators and college and university personnel, considered establishing "regional lifelong learning centers with on-site coordinators" desirable, but less than 60 percent of the Cooperative Extension Service and SEA personnel and none of the legislators did.

Curriculum Reforms

Twenty-three of the items on the second-round questionnaire dealt with proposed curricular changes. At least 56 percent of the participants found 22 of the proposed actions either "highly desirable" or "desirable." The proposed adult education curriculum reforms are listed below with the percentage of respondents who chose either "highly desirable" or "desirable" shown in parentheses:

Design educational offerings to meet local needs. (94.9%)

Develop college and university outreach programs. (92.3%)

Involve rural adults in planning educational programs. (88.8%)

Develop institutional arrangements to maximize the applicability of off-campus courses to on-campus degree programs. (88.3%)

Conduct assessments of the needs of rural adult learners. (86.2%)

Develop curriculums that can be delivered to rural adults via telecommunications. (86.2%)

Maintain an "open door" policy allowing public participation in planning and evaluating adult education programs. (84.7%)

Provide basic education (3 R's) where it is needed. (83.7%)

Recognize and teach toward differences in learning styles and cultural values. (79.7%)

Establish systems for evaluation and modification of educational programs offered to rural adults. (79.6%)

Expand college and university extension course offerings. (78.6%)

Emphasize competency-based education, rather than contact time, with adult learners. (77.0%)

Include coping with adapting skills in the curriculum offered to rural adults. (75.5%)

Offer more short courses. (71.9%)

Individualize programs for rural adults. (69.9%)

Expand correspondence/independent study course offerings. (69.9%)

Develop educational programs that will attract those rural adults most in need of education--the educationally disenfranchised. (68.9%)

Apply credits for work-related experiences toward advanced degrees. (67.9%)

Offer programs based on subject matter relevant to rural life. (64.8%)

Provide on-the-job training programs. (64.8%)

Offer periodic "teach ins" or Chautauquas in various rural communities to enable experts and laymen to communicate about topics of importance to rural residents. (71.9%)

Emphasize vocational education in programs for rural adult learners. (56.6%)

Offer more "solid core" classes, as opposed to community interest classes. (48.5%)

Chi square analyses of these 23 items yielded one significant chi square value related to the geographic location of the respondents and one associated with the roles of the respondents in rural education. Eighty-seven percent of the Plains states participants indicated that providing "on-the-job training programs" was desirable, while less than 60 percent of those from the Mountain states and the Northwest Coast states so indicated. About three-quarters of the second-round survey participants, including 92 percent of the adult educators, said that the inclusion of "coping and adapting skills in the curriculum offered to rural adults" was desirable, but only 56 percent of the SEA personnel and 50 percent of the rural school teachers and administrators agreed.

Alternative Delivery Systems

Responses to the first round of the modified Delphi survey were consolidated into 11 proposed actions concerning instructional delivery formats. More than 50 percent of the second-round respondents rated 10 of those actions as either "highly desirable" or "desirable." Chi square analyses of these 11 items yielded no significant chi square values associated with either the geographic location of the respondents or their roles in rural education. The proposed instructional delivery approaches are listed below with the percentage of respondents who chose either "highly desirable" or "desirable" shown in parentheses:

Combine high tech delivery systems with outreach efforts by "live" faculty. (90.3%)

Install statewide or interstate interactive telecommunication networks. (80.1%)

Offer additional courses through public television. (79.6%)

Package courses on video cassettes for home study. (78.6%)

Provide universal access to public radio and television programming. (77.0%)

Use newsletters, newspaper articles, and radio or television programs to educate rural adults--do not limit education to classes only. (76.5%)

Deliver courses to small groups in private homes via interactive telecommunications. (68.4%)

Apply the Cooperative Extension Service model to more areas of educational need. (67.3%)

Develop low-cost self-instructional modules for rural adult learners. (63.3%)

Develop loosely-formed and flexible learning societies, networks, and associations. (51.5%)

Use non-school facilities and instructors to reduce the apprehension of potential rural adult learners. (46.9%)

Information/Publicity

Nine proposed actions pertaining to information and publicity about educational programs for rural adults were included in the second-round questionnaire. At least 60 percent of the respondents indicated that all of those items were either "highly desirable" or "desirable." The proposed information/publicity actions are listed below with the

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percentage of respondents who chose either "highly desirable" or "desirable" shown in parentheses:

> Develop information networks to inform rural adults of educational resources and financial assistance that are available to them. (92.9)
>
> Distribute promotional brochures and flyers at places where people frequently go, such as stores, bowling alleys, banks, and beauty shops. (82.7%)
>
> Disseminate information on programs through targeted newsletters. (78.6%)
>
> Conduct a public awareness campaign to inform rural adults of the advantages to them of further education. (78.6%)
>
> Broadcast spot announcements featuring stories of success through education by rural adults. (77.6%)
>
> Form local volunteer organizations, including senior citizens, to publicize educational programs. (76.0%)
>
> Launch a public relations campaign to change the perception of many rural adults that advanced education is only for an elite few. (72.4%)
>
> Publish statewide educational opportunities newsletters. (66.3%)
>
> Improve the marketing of educational programs intended for rural adult learners by using professional sales and advertising techniques. (60.7%)

Chi square analyses of these nine items yielded one significant chi square value related to the roles of the respondents. There were no significant chi square values associated with the geographic location of respondents. About 83 percent of all second-round participants thought it desirable to "distribute promotional brochures and flyers at

places where people frequently go, such as stores, bowling alleys, banks, and beauty shops," but only one of three legislators agreed.

Increased Support

Twelve proposed actions dealing with increased support for adult education programs in rural areas were included in the second-round questionnaire. No less that 55 percent of the participants thought all of these proposals were desirable. The proposals to increase support for rural adult education are listed below with the percentage of respondents who chose either "highly desirable" or "desirable" shown in parentheses:

Identify funding sources to support rural adult education. (90.8%)

Inform legislators of the educational needs of rural adults. (90.8%)

Explain the educational needs of rural adults and justify programs for meeting them to educational policy makers. (85.2%)

Involve the business community in identifying the educational needs of rural adults and in providing programs to meet them. (83.7%)

Develop pilot projects in rural adult education with corporation and/or foundation support. (82.7%)

Determine the costs of providing programs to rural adult learners. (80.6%)

Increase state funding for adult education. (79.1%)

Develop statewide advocacy groups to represent rural adult educational interests. (74.0%)

Use federal education funds to subsidize small classes in rural communities. (68.4%)

Increase funding for public radio and television. (65.3%)

Hold home/community gatherings to build support for adult education. (58.7%)

Develop greater general support for land-grant universities. (55.6%)

Chi square analyses of these 12 items yielded two significant chi square values related to the roles of the respondents in rural education. No significant chi square values were associated with the geographic location of the participants.

Nearly 80 percent of all participants, including all of the legislators, thought it desirable to "increase state funding for adult education," but only 67 percent of the respondents classified as "others" and 58 percent of the rural school teachers and administrators thought so. About 56 percent of all respondents, including two of three legislators and over three-fourths of the Cooperative Extension agents considered it desirable to "develop greater general support for land-grant universities," but less than one-half of the adult educators, RESA staff, SEA personnel, and others agreed.

Student Services and Financial Assistance

Twelve questionnaire items dealt with proposed actions in the area of student services and financial assistance. At least 57 percent of the participants found nine of the proposal statements desirable. The items related to student

services and financial assistance are listed below with the percentage of respondents who chose either "highly desirable" or " desirable" shown in parentheses:

Create new kinds of scholarships to assist non-traditional students, including part-time and non-degree students. (88.3%)

Provide educational counseling for rural adults. (82.7%)

Implement programs to help rural adults gain confidence in their ability to succeed in an educational setting. (79.6%)

Increase opportunities for students to gain credits through credit-by-examination programs, such as CLEP. (79.1%)

Improve child care services for children of adult learners. (72.4%)

Operate nursery school and pre-school programs at the same times and locations as classes for rural adults. (70.9%)

Offer 4-6 week summer "bridge" programs at colleges to upgrade the study skills and general educational background of rural students before they enter regular college classes. (62.8%)

Provide financial assistance to adults who must relocate in order to obtain education. (60.7%)

Make more short-term student housing available on campuses. (57.7%)

Develop shuttle transportation services to link rural adults with educational programs. (39.8%)

Increase the availability of apartment-type student housing on college campuses. (30.1%)

Make registration for college courses more convenient for rural adults. (7.6%)

Chi square analyses of these 12 items yielded two significant chi square values that were associated with the

roles of respondents in rural education. No significant chi square values were related to the geographic location of the respondents.

More than 60 percent of all participants said that it would be desirable to "offer 4-6 week summer 'bridge' programs at colleges to upgrade the study skills and general educational background of rural students before they enter regular college classes," but less than 40 percent of the Cooperative Extension Service personnel and only one-half of the state education agency staff thought it desirable. Only 40 percent of all respondents regarded it desirable to "develop shuttle transportation services to link rural adults with educational programs," but nearly 62 percent of the adult educators and 52 percent of the college and university personnel responding said it was desirable.

Instructional Personnel

Eleven proposed actions related to instructional personnel were included on the second-round questionnaire. At least 57 percent of all respondents indicated that eight of those actions would be desirable. The 11 proposed actions involving instructional personnel are listed below with the percentage of respondents who chose either "highly desirable" or "desirable" shown in parentheses:

> Offer incentives to college and university faculty to provide extension classes for rural adult learners. (86.2%)

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Provide inservice education for prospective instructors of rural adults. (83.2%)

Increase the number of "live" instructors available to remote locations. (74.0%)

Use experts in or near rural communities as instructors, rather than college professors. (66.8%)

Identify and employ more minority instructors, as appropriate to local ethnic populations. (62.8%)

Increase financial compensation for instructors of rural adults. (61.2%)

Increase use of volunteers to provide educational services for rural adults. (59.2%)

Hire instructors especially to serve the educational needs of rural adults. (57.1%)

Provide more bilingual instructors. (41.8%)

Use community educators who have been trained by the Mott Foundation to teach rural adults. (25.5%)

Provide at least two full-time County Agents for each county. (21.4%)

Chi square analyses of these 11 items yielded four significant chi square values associated with the geographic location of the respondents and three related to the roles of respondents in rural education. These significant differences in perceptions of the desirability of the proposed actions are highlighted below.

More than 90 percent of the participants from the Mountain states thought that offering "incentives to college and university faculty to provide extension classes for rural adult learners" was desirable, but only about 80 percent of those from the Plains and Northwest Coast states

thought so. More Northwest respondents (81%) regarded the proposal to "identify and employ more minority instructors, as appropriate to local ethnic populations" as desirable than did those from the other two subregions. Likewise, providing "more bilingual instructors" was rated as desirable by 63 percent of the participants from the Northwest Coast states, but less than 40 percent of those from the Plains and Mountain states concurred. Only 21 percent of all respondents thought that providing "at least two full-time County Agents for each county" was desirable, but 28 percent of the participants from the Plains states thought so.

Three-fourths of all respondents, including 88 percent of the state education agency personnel said that the proposal to "increase the number of 'live' instructors available to remote locations" was desirable, but less than 60 percent of the rural school personnel and only 46 percent of the RESA staff responding were in agreement. About 60 percent of all participants indicated it would be desirable to "increase financial compensation for instructors of rural adults," but less than 40 percent of the legislators, RESA personnel, and SEA personnel said so. Only 21 percent of all participants thought that providing "at least two full-time County Agents for each county" was desirable; however, 31 percent of the adult educators and 51 percent of the Cooperative Extenstion Service agents thought it was.

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Instructional Support Services

Eight proposed actions concerning instructional support services for rural adult education were included in the second round questionnaire. At least 63 percent of all participants indicated that all of those actions would be desirable. The proposed instructional support measures are listed below with the percentage of respondents who chose either "highly desirable" or "desirable" shown in parentheses:

Identify educational resources presently available in rural areas. (89.3%)

Provide learning resources to rural sites. (84.7%)

Use public school personnel and facilities to facilitate educational programs for adults in rural areas. (82.1%)

Develop comprehensive public library services to serve all communities. (76.0%)

Increase use of public television in programs for rural adults. (76.0%)

Use non-traditional settings, such as homes, offices, and business facilities, for off-campus courses. (71.4%)

Provide on-line computerized library search services in rural communities. (69.9%)

Provide mobile educational units similar to mobile libraries for programs at remote locations. (63.8%)

Chi square analyses of these eight items yielded one signifciant chi square value associated with the geographic location of the respondents. No significant chi square values were related to the roles of the participants in

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rural education. More than 87 percent of the respondents from the Plains and Mountain states found it desirable to "provide learning resources to rural sites," but only 73 percent of those from the Pacific Coast states concurred.

Rural Elementary and Secondary Education Reforms

Five items on the second-round questionnaire represented proposed actions involving reforms in rural elementary and secondary education. At least 60 percent of the participants regarded three of those proposals as desirable. The items related to reforms in rural elementary and secondary education are listed below with the percentage of respondents who chose either "highly desirable" or "desirable" shown in parentheses:

> Develop positive attitudes toward lifelong learning among junior and senior high school students. (90.3%)
>
> Improve the quality of rural high schools through extra-curricular enrichment programs. (61.7%)
>
> Make the k-12 curriculum in rural schools non-sexist with regard to supporting the aspirations of students. (60.7%)
>
> Improve the quality of rural high schools by providing more science equipment and computers. (44.3%)
>
> Reduce the number of athletic events in small rural schools to make room for other community acitivities, including adult education. (28.1%)

Chi square analyses of these five items yielded two significant chi square values related to the geographic location of the respondents. No significant chi square

values were associated with the roles of the respondents in rural education.

No less than 90 percent of all second-round participants, including 98 percent of those from the Plains states, said it would be desirable to "develop positive attitudes toward lifelong learning among junior and senior high school students," but a smaller number (86%) of the respondents from the Mountain states were in agreement. At least 70 percent of the Plains and Northwest Coast participants rated the proposal to "make the k-12 curriculum in rural schools non-sexist with regard to supporting the aspirations of students," but only 52 percent of those from the Mountain states thought it desirable.

Conclusions

At least 50 percent of the respondents affirmed the desirability of 111 of the 125 actions listed on the questionnaire. Out of the 250 chi square analyses performed to identify any significant differences in perception among the various groups of participants, only 29 significant (.05 level) chi square values were obtained. Thirteen of the significant chi square values were associated with the geographic locations of the participants; 16 were related to the differing rural education roles of the respondents. Thus, a majority of respondents in this study agreed on the desirability of a wide range of steps to be taken by various agencies and institutions in order to provide adequate

educational opportunities for rural adults in the 13-state region.

Discussion

The participants in this modified Delphi survey were to a great extent self-selected. The fact that 196 of the 217 first-round respondents chose to answer a 203-item questionnaire in the second round demonstrated a commitment to the process and suggested a high degree of involvement with the subject matter of the study, education for rural adults. Nevertheless, the participants represented only themselves. Generalization from this sample is not recommended.

The respondents in this study saw stronger commitments and more favorable arrangements as ways for postsecondary education to be extended to more rural adults. Community colleges and land grant universities were identified as institutions that should have specific missions to educate rural adults.

Coordination of Services

The participants seemed to view interagency and interinstitutional coordination as an especially important area for action, judging by the number of measures generated and validated under this category. The message was "loud and clear:" Colleges, universities, school districts, government agencies, and community organizations should work together to serve the educational needs of rural adults

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without regard for state lines or service area boundaries. Respondents indicated that rural citizens should be given access to educational programs from all available sources through lifelong learning centers, pulblic school systems, colleges, or other brokers, such as educational cooperatives. The emphasis emerging from this portion of the study was on empowering and, perhaps, compelling existing agencies and institutions to serve rural adults. The participants preferred to do that through a decentralized system, rather than a more centralized one. A proposal to place responsibility for coordinating rural adult education in a state in a single university was rejected by a majority of respondents. Also, there was little support for the creation of additional layers of bureaucracy. Although one-half of the participants thought state policy-making boards for rural education would be desirable, only thirty percent thought establishing rural adult education districts with local trustees was a good idea.

Program Design and Delivery

Another major area of concern was the curriculum available to rural adults. The participants indicated overwhelmingly that offerings should be based on the documented needs of rural adult learners. For participants in this study, the needs of rural adults were diverse--ranging from adult basic education in the three R's

to vocational education and college degree programs. The respondents emphasized flexiblity (short courses, competency-based education, distance education, on-the job training, and individualization) in programming for rural adults.

Survey participants supported a variety of alternative methods for delivering educational programs to rural adults. Formats considered desirable included interactive telecommunications, public television, video cassettes, newsletter and newspaper articles, radio, adaptation of the Cooperative Extension Service model, self-instructional modules, and networking. It seems important to note, however, that 90 percent of the respondents indicated the desirability of combining "high tech" delivery with the "high touch" of outreach by "live" instructors. In fact, those who participated in this study proposed increasing the number of instructors at remote learning sites by offering incentives to college and university faculty and by using non-college rural residents as paid or volunteer providers of educational services. In addition, participants in this portion of the modified Delphi survey gave strong endorsement to several measures aimed at increasing instructional support services and making better use of existing educational resources in rural communities.

These survey participants would attempt to overcome informational barriers to rural adult education by a variety

of means. They said it was desirable to publicize adult education programs through brochures, newsletters, and spot announcements on radio and TV. In additon, the participants thought public relations and news media should be used to persuade rural adults that education will be beneficial to them.

Support for Rural Adult Learners

It was not surprising that, having identified barriers to education for rural adults, panelists in this study recommended increased public support for adult education in rural areas. Most respondents thought that both public and private financial support should be given to rural adult educaton.

In the area of student services and financial assistance, participants in this study favored some changes in current practice. Most of those responding to the second-round questionnaire found scholarships for part-time and non-degree students desirable. They also recognized a need for child care and pre-school programs to assist adult learners who have children. Further, the participants would like to see programs implemented to help rural adults adapt to formal educational programs.

Elementary and Secondary Education:

Genesis of Adult Learning

The participants linked reforms in rural elementary and secondary schools to advances in rural adult education.

They said that rural schools should develop attitudes for lifelong learning and be non-sexist in their aspirations for students. They also favored extra-curricular enrichment programs in rural high schools, but not at the expense of diminished athletic programs.

Differences of Opinion: Matters of Turf?

There were relatively few statistically significant differences in perception with respect to the desirability of the steps proposed to provide adequate educational opportunities for rural adults among the various subgroups in this study. It is not surprising that there were some differences of opinion associated with the geographic location of the panelists, given the vast expanse of the 13-state region. Although there were only a few significant differences in perceptions related to the roles respondents played in rural education, some of those differences were on fundamental issues and require closer scrutiny.

There appear to be some issues that involve struggles over "turf." For example, on the issues of leadership in providing education for rural adults and greater support for land grant universities, college and university personnel and Cooperative Extension agents favored a leadership role and increased support for land grant universities to a much greater extent than respondents from regional and state education agencies. On the other hand, college and university people differed with rural k-12 educators, RESA

staff, and SEA personnel on the proposal to allow public schools to offer postsecondary courses in communities not served by any college.

Interestingly, the three legislators who participated in the second round of the survey favored increased funding for rural adult education, greater support for land grant universities, a leadership role in rural adult education for land grant universities, subsidization of low-enrollment courses in rural communities, and provision of postsecondary courses by public schools. They did not find interagency cooperation in planning programs for rural adults, state university faculty assistance in establishing community education programs, improved compensation for instructors of rural adults, or the creation of regional lifelong learning centers desirable. They seemed to think that existing institutions, with a little more help, could meet the educational needs of rural adults better than new agencies at the local level or new cooperative arrangements among established agencies could.

Questions about who is to provide educational services to adults in rural areas and who is to control rural adult education programs draw conflicting answers from different constituencies. People such as the participants in this survey who are interested in improving access to education for rural adults need to resolve their differences if they wish to develop a united front in advocating a stronger

public commitment to education for all Americans, including rural adults. The results of this study suggest there is more that unites than divides those who seek to provide educational opportunity for rual adults.

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